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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,682	09/30/2003	J. Edward Colgate	007448-0306121	1344

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EXAMINER
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TRAN, KHOI H

ART UNIT	PAPER NUMBER
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3651

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/673,682

Applicant(s)

COLGATE ET AL.

Examiner

Khoi H Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 3, 13, 18, 26 and 28-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-12, 14-17, 19-25, and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**KHOI H. TRAN**  
**PRIMARY EXAMINER**

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 4, 11, 14-17, 19, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Laundry et al. 6,796,447.

Laundry '447 discloses an intelligent assist device (IAD) per claimed invention. The IAD comprises an overhead moveable trolley (Figures 1 and 2). The IAD comprises a cable 21 that extends down from said trolley and connecting to a load 20. The IAD comprises an angle sensor 25 coupled to the cable to sense a characteristic of motion imparted by a human operator to the load 20. The IAD comprises a controller operatively coupled with the sensor and the trolley to control the movements of the trolley. Said controller estimates an amount of oscillation in the cable that does not

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correspond to the motion imparted by the human operator and adjusts the movements of the trolley based thereon. Said controller filters at least a portion of the signals from the sensor that are indicative of the oscillation in the support.

3. Claims 1 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor 6,575,317.

Taylor '317 discloses an intelligent assist device (IAD) per claimed invention. The IAD comprises an overhead moveable trolley (Figures 1 and 2). The IAD comprises a cable 21 that extends down from said trolley and connecting to a load 20. The IAD comprises sensor 25 coupled to the cable to sense a characteristic of motion imparted by a human operator 11 to the load 20. The IAD comprises a controller operatively coupled with the sensor and the trolley to control the movements of the trolley. Said controller estimates an amount of oscillation in the cable that does not correspond to the motion imparted by the human operator and adjusts the movements of the trolley based thereon.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-7, 9, 10, and 20-22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laundry et al. 6,796,447 in view of Kato et al. 6,460,711.

In regards to claims 5, 9, 20, and 24 Laundry '447 discloses all elements per claimed invention as explained in paragraph 3 above. However, it is silent as to the explicit mentioning of a plurality of low pass filters and band pass filter for filtering out portion of the signals from the angle sensor.

Kato '711 discloses an anti-oscillation system for a moving trolley. Kato teaches that low pass filter and band pass filter can be used to filter out noises from detected signals.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Laundry '447 with plurality of low pass filters and band pass filter because they filter out noises from the detected signals, as shown by Kato '711.

In regards to claims 6, 7, 10, 21, 22, and 25, Laundry '447 discloses all elements per claimed invention as explained above. However, it is silent as to the explicit mentioning of a low cut-off frequency of about 0.5 Hz, or 1.5 Hz, and a high cut-off frequency of about 5.0Hz.

Nevertheless, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have provided to Laundry '447 filters with a low cut-off frequency of about 0.5 Hz, or 1.5 Hz, and a high cut-off frequency of about 5.0Hz, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F .2d 272, 205 USPQ 215 (CCPA 1980).

6. Claims 8 and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Laundry et al. 6,796,447 in view of Kato et al. 6,460,711 as applied to claims 5 and 19 above, and further in view of Yucius 4,284,978.

Laundry '447 discloses all elements per claimed invention as explained above. However, it is silent as to the explicit mentioning of a rectifier.

Yucius '978 shows that rectifier can be used to rectify signals within a control system.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Laundry '447 with a rectifier because it facilitates the rectifying of signals from the detected signals within a control system, as shown by Yucius '978.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laundry et al. 6,796,447 in view of Peshkin 6,668,668.

Laundry '447 discloses all elements per claimed invention as explained in paragraph 3 above. However, it is silent as to the specifics of the cable 21 being in the form of a chain.

Peshkin '668 discloses of an overhead-motorized moveable trolley system. Peshkin '447 teaches that the support cable 24 can be in the form of a chain for supporting a load 26 (Figure 1).

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Laundry '447 with a chain that extends from the trolley because it facilitates the supporting of a load, as taught by Peshkin '668.

***Response to Arguments***

8. Applicant's arguments filed 12/28/2004 have been fully considered but they are not persuasive.

Applicant argued that Laundry et al. 6,796,447 does not anticipate the claimed invention. Applicant indicated that Laundry '447 only estimate the force applied to the load by the operator. Applicant argued that Laundry '477 does not disclose "estimating an amount of oscillation in the support that does not correspond to the motion imparted by the human operator". These arguments have not been found to be persuasive. Applicant's attention is directed to the recognition by Laundry '477 that unwanted pendulum effects will occur when an operator imparts a moving force to the load. In order to estimate only the force imparts onto the load by the operator, Laundry '477 must differentiates between the imparted force and the additional pendulum force. The pendulum effects/oscillation force must be calculated or estimated in order to derive the actual human imparted force. Therefore, Laundry '477 in fact anticipates the claimed combination, as indicated in paragraph 2 above.

Applicant argued that Taylor 6,575,317 does not anticipate the claimed invention. Applicant indicated that Taylor '317 only measure the force applied to the load by the operator. Applicant argued that Taylor '317 does not disclose "estimating an amount of oscillation in the support that does not correspond to the motion imparted by the human operator". These arguments have not been found to be persuasive. Applicant's attention is directed to the recognition by Taylor '317 that unwanted pendulum effects will occur when an operator imparts a moving force to the load. In

order to measure only the force imparted onto the load by the operator, Taylor '317 must differentiate between the imparted force and the additional pendulum force. The pendulum effects/oscillation force must be measured or calculated in order to derive the actual human imparted force. The measuring or calculating of the pendulum /oscillating effects constitutes the estimating step. Therefore, Taylor '317 in fact anticipates the claimed combination, as indicated in paragraph 3 above.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H Tran whose telephone number is (703) 308-1113. The examiner can normally be reached on Monday-Thursday.

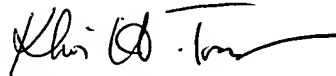
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (703) 308-1113. The fax phone



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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khoi H Tran  
Primary Examiner  
Art Unit 3651

KHT  
01/07/2005